### => d his

# (FILE 'HOME' ENTERED AT 14:08:42 ON 20 APR 2005)

## FILE 'CAPLUS' ENTERED AT 14:09:00 ON 20 APR 2005

- L1 0 S (?PROPYN? OR ?BUTYN?) (L) (HYPOHALI? (L) RADICAL?) (L) OXIDA?
- L2 1 S (?PROPYN? OR ?BUTYN?) (L) (HYPOHALI? (L) RADICAL?)
- L3 4 S OXIDA? (L) (HYPOHALI? (L) RADICAL?) (L) CARBOXYL?

```
ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
L3
     2003:150421 CAPLUS
AN
     138:172129
DN
     Making carboxylated cellulose fibers and paper products
TI
IN
     Jewell, Richard A.; Komen, Joseph Lincoln; Su, Bing; Weerawarna, S.
     Ananda; Li, Yong
PΑ
     Weyerhaeuser Company, USA
     U.S., 23 pp., Cont.-in-part of U.S. 6,379,494.
SO
    CODEN: USXXAM
DT
     Patent
    English
LΑ
FAN.CNT 3
     US 6524240
                                        APPLICATION NO.
                                                              DATE
                      ----
                                         -----
                                                             20000817
19991015
PΙ
     US 6524348
                      B1 20030225 US 2000-641276
                       B1 20020430 US 1999-418909
     US 6379494
PRAI US 1999-272137
                       B2
                             19990319
    US 1999-418909
                       A2 19991015
    MARPAT 138:172129
RE.CNT 34
             THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
     The title method of making carboxylated cellulose fibers whose
AB
     fiber strength and d.p. is not significantly sacrificed comprises oxidation
     and stabilized stages. The title method involves the use of cyclic
    nitroxide free radical compds. as a primary oxidant
     and a hypohalite salt as a secondary oxidant in an aqueous
     environment. Preferably the oxidized cellulose is then stabilized against.
     D.P. loss in alkaline environments and color reversion with a reducing agent
     such as Na borohydride. Alternatively it may be treated with an tertiary
     oxidant such as Na chlorite. The method results in a high
    percentage of carboxyl groups located at the fiber surface. The
    product is especially useful as a papermaking fiber where it contributes
     strength and has a higher attraction for cationic additives. The product
     is also useful as an additive to recycled fiber to increase strength.
    method can be used to improve properties of either virgin or recycled
     fiber. It does not require high \alpha-cellulose fiber but is suitable
     for regular market pulps.
L3
    ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN
    2002:327792 CAPLUS
DN
    136:342435
ΤI
    Method of making carboxylated cellulose fibers and products of the method
ΤN
    Jewell, Richard A.; Komen, Joseph Lincoln; Li, Yong; Su, Bing
PA
    Weyerhaeuser Company, USA
SO
    U.S., 18 pp., Cont.-in-part of U.S. Ser. No. 272,137.
    CODEN: USXXAM
DT
    Patent
LΑ
    English
FAN.CNT 3
                     KIND DATE
    PATENT NO.
                                        APPLICATION NO.
                                                              DATE
                       ____
                                         -----
                              -----
ΡI
    US 6379494
                        В1
                              20020430 US 1999-418909 19991015
                       В1
    US 6524348
                              20030225 US 2000-641276
                                                              20000817
                       AA 20010426
A1 20010426
    CA 2384701
                              20010426
                                        CA 2000-2384701
                                                              20001006
    WO 2001029309
                                        WO 2000-US27837
                                                              20001006
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
            HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
            LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
            SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,
```

ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,

```
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
             CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                20020911
                                           EP 2000-970682
     EP 1238142
                           A1
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
         R:
             IE, SI, LT, LV, FI, RO, MK, CY, AL
                           T2
                                 20030402
                                             JP 2001-532283
                                                                      20001006
PRAI US 1999-272137
                           A2
                                 19990319
     US 1999-418909
                           A2
                                 19991015
     WO 2000-US27837
                          W
                                 20001006
RE.CNT 33
              THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
     The invention is directed to a method of making carboxylated
AB
     cellulose fibers whose fiber strength and d.p. is not significantly
     sacrificed. The method involves the use of TEMPO (2,2,6,6-
     tetramethylpiperidinyloxy free radical) as a primary
     oxidant and a hypohalite salt as a secondary
     oxidant in an aqueous environment. Preferably the oxidized cellulose
     is then stabilized against D.P. loss in alkaline environments and color
     reversion with a reducing agent such as sodium borohydride. Alternatively
     it may be treated with an oxidant such as sodium chlorite. The
     method results in a high percentage of carboxyl groups located
     at the fiber surface. The product is especially useful as a papermaking fiber
     where it contributes strength and has a higher attraction for cationic
     additives. The product is also useful as an additive to recycled fiber to
     increase strength. The method can be used to improve properties of either
     virgin or recycled fiber. It does not require high \alpha-cellulose
     fiber but is suitable for regular market pulps.
     ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
L3
AN
     2001:300943 CAPLUS
DN
     134:312682
TI
     Method of making carboxylated cellulose fibers and products
IN
     Jewell, Richard A.; Komen, Joseph Lincoln; Su, Bing; Weerawarna, S.
     Ananda; Li, Yong
PΑ
     Weyerhaeuser Company, USA
SO
     PCT Int. Appl., 52 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     English
FAN.CNT 3
     PATENT NO.
                         KIND
                                 DATE
                                            APPLICATION NO.
                                                                     DATE
                          ----
                                             -----
                                 _____
                                            WO 2000-US27837
PI .
     WO 2001029309
                          A1
                                 20010426
                                                                     20001006
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
             HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
             LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
             SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,
         ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
             CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     US 6379494
                                 20020430
                          B1
                                           US 1999-418909
                                                                     19991015
     CA 2384701
                          AA
                                 20010426
                                             CA 2000-2384701
                                                                     20001006
     EP 1238142
                          A1
                                 20020911
                                             EP 2000-970682
                                                                     20001006
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL
     JP 2003512540
                          T2
                                 20030402
                                             JP 2001-532283
                                                                     20001006
PRAI US 1999-418909
                                 19991015
                          Α
     US 1999-272137
                          A2
                                 19990319
     WO 2000-US27837
                          W
                                 20001006
OS
     MARPAT 134:312682
RE.CNT 3
              THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
```

### ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB A method of making highly carboxylated cellulose fibers whose fiber strength and d.p. is not significantly sacrificed comprises (1) oxidizing the cellulose fiber (kraft pulp) with a cyclic nitroxide free radical compound as a primary oxidant and a hypohalite salt as a secondary oxidant under aqueous alkaline conditions; and (2) treating the oxidized cellulose against d.p. loss in aqueous suspension with a stabilizing agent selected from the group consisting of reducing agent and tertiary oxidizing agent. The product is especially useful as a papermaking fiber where it contributes strength and has a higher attraction for cationic additives, and it is also useful as an additive to recycled fiber to increase strength.

L3 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1940:740 CAPLUS

DN 34:740

OREF 34:116h-i

TI Carbocyclic acids of the cyclopentanopolyhydrophenanthrene series

IN Bockmuhl, Max; Ehrhart, Gustav; Ruschig, Heinrich

PA Winthrop Chemical Co.

DT Patent

LA Unavailable

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 2171959 19390905 US

AB Compds. such as acetoxypregnenolones, by **oxidation** of their acetyl **radicals** with an oxidizing agent such as a **hypohalite** or chromic acid, yield **carboxylic** acids of white crystalline character, insol. in water, soluble in alc. and which may be used as intermediates for further synthesis. Several examples with details of procedure are given.

```
=> s oxida?(1)hypohali?(1)carboxyl?
        708333 OXIDA?
           939 HYPOHALI?
        368775 CARBOXYL?
             9 OXIDA? (L) HYPOHALI? (L) CARBOXYL?
L5
=> s 15 not 13
             5 L5 NOT L3
L6
=> d bib hit 1-5
L6
     ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
     2002:330256 CAPLUS
ΑN
DN
     136:340395
ΤI
     Oxidative process and catalysts for the preparation of unsaturated
     carboxylic acids from the corresponding unsaturated aldehydes
     Chandalia, S. B.; Chandnani, Kavita; Srivastava, Sangeeta
IN
     Somaiya Organo Chemicals Limited, India
PΑ
SO
     Eur. Pat. Appl., 4 pp.
     CODEN: EPXXDW
DT
     Patent
LΑ
     English
FAN.CNT 1
     PATENT NO. KIND DATE APPLICATION NO. DATE
     _____
                         ----
                                 -----
                                             -----
                                                                      -----
     EP 1201637
                         A2
                                 20020502 EP 2001-309022 20011024
PΙ
     EP 1201637 A3 20030219
EP 1201637 B1 20050316
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     US 2002072627 A1 20020613
                                            US 2001-982099
                                                                      20011019
PRAI IN 2000-MU957
                          A
                                 20001025
OS
     CASREACT 136:340395
ΙT
     Alkali metal compounds
     RL: RCT (Reactant); RGT (Reagent); RACT (Reactant or reagent)
        (alkali metal hypohalites; oxidants for the preparation
        of unsatd. carboxylic acids from the corresponding unsatd.
        aldehydes)
     ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
L6
AN
     1997:697180 CAPLUS
DN
     127:307619
TΤ
     Oxidation of sugars with hypohalides in preparation of
     carboxylates used in detergents formulation
IN
     Fleche, Guy
PA
     Fleche, Guy, Fr.
     Can. Pat. Appl., 27 pp.
SO
     CODEN: CPXXEB
DT
     Patent
LA
     French
FAN.CNT 1
                     KIND DATE APPLICATION NO.
     PATENT NO.
                                 -----
     -----
                        ____
                                             -----
     CA 2193034 AA 19970622 CA 1996-2193034
FR 2742755 A1 19970627 FR 1995-15269
FR 2742755 B1 19980220
NO 9605268 A 19970623 NO 1996-5268
NO 307886 B1 20000613
US 5831043 A 19981103 US 1996-769050
EP 798310 A1 19971001 EP 1996-402823
EP 798310 B1 20020424
                                                                    19961216
19951221
PΙ
                                                                     19961210
                                                                      19961218
                                                                      19961219
```

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI

```
AT 216703
                         Ε
                                20020515 AT 1996-402823
                                                                    19961219
                                20021201
     ES 2176420
                          T3
                                           ES 1996-402823
                                                                    19961219
                                          JP 1996-341791
     JP 09235291
                          A2
                                19970909
                                                                    19961220
PRAI FR 1995-15269
                          Α
                                19951221
     Oxidation of sugars with hypohalides in preparation of
     carboxylates used in detergents formulation
L6
     ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN
     1993:472482 CAPLUS
     119:72482
DN
ΤI
     Preparation of \alpha,\beta-epoxy carboxylic acids from
     \alpha, \beta-unsaturated carboxylic acids
     Moriwaki, Yoichiro; Akaishi, Ryoichi
IN
     Osaka Juki Kagaku Kogyo Kk, Japan
PΑ
SO
     Jpn. Kokai Tokkyo Koho, 6 pp.
     CODEN: JKXXAF
DT
     Patent
     Japanese
TιA
FAN.CNT 1
                                DATE . APPLICATION NO.
     PATENT NO.
                        KIND
                         ----
     -----
                                -----
                                            -----
                                                                    _____
     JP 05039277
                         A2
                                           JP 1991-196519
                                19930219
                                                                    19910806
                         B2
     JP 2892866
                                19990517
PRAI JP 1991-196519
                                19910806
     CASREACT 119:72482; MARPAT 119:72482
IT
     Oxidation
        (of \alpha, \beta-unsatd. carboxylic acids, by
        hypohalites)
     ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
1.6
AN
     1968:39503 CAPLUS
DN
     68:39503
TI
     Hypohalite-induced oxidative decarboxylation of \alpha-amino acids
ΑU
     Van Tamelen, Eugene E.; Haarstad, Vernon B.; Orvis, Roy L.
CS
     Univ. of Wisconsin, Madison, WI, USA
SO
     Tetrahedron (1967), 24(2), 687-704
     CODEN: TETRAB; ISSN: 0040-4020
DT
     Journal
LΑ
     English
AB
     As a model for certain in vivo alkaloid transformations and as a possible
     means for the preparation of specific enamines, the hypohalite
     -induced oxidative decarboxylation of various primary, secondary
     and tertiary \alpha\text{-amino} acids was studied. The following reactions
     were observed: (1) N,N-dimethylglycine → N-chlorodimethylamine; (2)
     N-methyl-pipecolic acid \rightarrow N-methyl-\Delta2-piperideine dimer; (3)
     quinolizidine-4-carboxylic acid \rightarrow \Delta 5,10
     dehydroquinolizidine-4-carboxylic acid; (4) 2-methyltryptophan
     → 4-acetylquinoline; (5) kynurenine (I) → kynurine (II); (6)
     2,3,4,5-tetrahydro-\beta-carboline-4- carboxylic acid \rightarrow
     norharman; (7) 3-methyl-2,3,4,5-tetrahydro-β-carboline-4-
     carboxylic acid \rightarrow mono- and dichloro-3-methyliso-\beta-
     carbolines and a dichloro spiro lactam oxindole. The mechanisms of
     certain of these changes are discussed. 25 references.
L6
    ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
AN
     1937:42591 CAPLUS
DN
     31:42591
OREF 31:5949e-f
ΤI
     Polyhydroxycarboxylic acids and their salts
IN
     Finkelstein, Maria
DT
LA
     Unavailable
FAN.CNT 1
```

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE				
			<b></b>						
ΡI	GB 462565		19370311	GB					
AB	These are obtained by oxidation of trihexosan in alkaline solution								
	with, e. g., a permanganate, halogen, hypohalite or H2O2. Mono-								
	or di-carboxylic ac	ids are	obtained ac	cording to the amount	of				
	oxidizing agent use	d. The	y may be pre	cipitated as basic Ba	salts from which				
the									
	free acids or other	salts,	e.g., the	soluble neutral alkali:	ne earth, Fe, Cu,				
Mn,									
	Ni and Ag salts, ca	n be pr	epared The	compds. have a therape	utic use.				

```
(FILE 'HOME' ENTERED AT 14:08:42 ON 20 APR 2005)
     FILE 'CAPLUS' ENTERED AT 14:09:00 ON 20 APR 2005
              0 S (?PROPYN? OR ?BUTYN?) (L) (HYPOHALI? (L) RADICAL?) (L) OXIDA?
L1
L2
              1 S (?PROPYN? OR ?BUTYN?) (L) (HYPOHALI? (L) RADICAL?)
L3
              4 S OXIDA? (L) (HYPOHALI? (L) RADICAL?) (L) CARBOXYL?
L4
              2 S OXIDA? (L) (HYPOHALÍ? (L) ?OXIDE) (L) CARBOXYL?
L5
              9 S OXIDA? (L) HYPOHALI? (L) CARBOXYL?
              5 S L5 NOT L3
L6
=> s oxida?(p)hypohali?(p)carboxyl?
        708333 OXIDA?
           939 HYPOHALI?
        368775 CARBOXYL?
L7
             9 OXIDA? (P) HYPOHALI? (P) CARBOXYL?
=> s hypohali?(l)?tempo(l)nitrox?
           939 HYPOHALI?
          3402 ?TEMPO
         13208 NITROX?
L8
             3 HYPOHALI? (L)?TEMPO(L)NITROX?
=> d bib hit 1-3
     ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
L8
AN
     2004:159015 CAPLUS
DN
     140:199022
TΙ
     Procedure for the production of alkynecarboxylic acids by the oxidation of
     alkynyl alcohols with hypohalites in the presence of a nitroxyl compound
     Stohrer, Juergen; Fritz-Langhals, Elke; Bruenninghaus, Christian
ΤN
PΑ
     Consortium fuer Elektrochemische Industrie G.m.b.H., Germany
SO
     Ger., 11 pp.
     CODEN: GWXXAW
DT
     Patent
LΑ
     German
FAN.CNT 1
     PATENT NO.
                        KIND
                                DATE
                                            APPLICATION NO.
                                                                   DATE
                         ----
                                 -----
                                             -----
PΙ
     DE 10244633
                          B3
                                 20040226
                                            DE 2002-10244633
                                                                    20020925
     EP 1403240
                          A1
                                            EP 2003-20442
                                 20040331
                                                                    20030911
     EP 1403240
                          _{\rm B1}
                                 20040721
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     AT 271533
                          Ε
                                 20040815
                                            AT 2003-20442
                                                                    20030911
     US 2004059154
                          A1
                                 20040325
                                             US 2003-667810
                                                                    20030922
     JP 2004115519
                          A2
                                 20040415
                                             JP 2003-331417
                                                                    20030924
PRAI DE 2002-10244633
                          Α
                                 20020925
     CASREACT 140:199022
RE.CNT 2
              THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
     Alkynecarboxylic acids (e.g., propargylic acid) are prepared in high yield
AB
     and selectivity by the oxidation of an alkynyl alc. (e.g., propargylic alc.)
     with a hypohalite (e.g., sodium hypochlorite) in the presence of
     a nitroxyl compound (e.q., 4-hydroxy-TEMPO) at a pH
     value >7 by continuous addition of the alkynyl alc. and the hypohalogenite to
     the reaction mixture
     2226-96-2, 4-Hydroxy-TEMPO
     RL: CAT (Catalyst use); USES (Uses)
        (in a procedure for the production of alkynecarboxylic acids by the
oxidation
        of alkynyl alcs. with hypohalites in the presence of a
```

```
nitroxyl compound)
     14691-89-5, 4-Acetamido-TEMPO
IT
     RL: CAT (Catalyst use); USES (Uses)
        (procedure for the production of alkynecarboxylic acids by the oxidation of
        alkynyl alcs. with hypohalites in the presence of a
       nitroxyl compound)
     ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
L8
     1999:49253 CAPLUS
AN
DN
     130:97117
ΤI
    Manufacture of tricarboxy starch
     Shinpo, Masafumi; Sakaiya, Hisashi; Sumitani, Makoto
IN
    Mitsubishi Gas Chemical Co., Ltd., Japan
PA
SO
     Jpn. Kokai Tokkyo Koho, 4 pp.
     CODEN: JKXXAF
DT
     Patent
LA
    Japanese
FAN.CNT 1
     PATENT NO. KIND DATE
                                          APPLICATION NO.
                                                                 DATE
                        ----
                               -----
    JP 11012301
                         A2
                               19990119
                                         JP 1997-164284
                                                                   19970620
PRAI JP 1997-164284
                               19970620
     Title materials, useful for scale inhibitors, pigment dispersants, sizing
     agents, concrete admixt., and detergent builders, etc., are manufactured by
     tow-step oxidation of starch with hypohalites in the presence of
     nitroxyl compds. and then with peroxides in the presence of
     catalysts. Thus, corn starch was oxidized with NaOCl in the presence of
     TEMPO and further oxidized with H2O2 in the presence of
     K5PTi2W10O40 to give tricarboxy starch having CO2H content .apprx.100% at
     6 position and 31% at 2- and 3-position of glycopyranose units.
IT
     2564-83-2, TEMPO
                       7681-52-9, Sodium hypochlorite
                                                        7722-84-1,
     Hydrogen peroxide, uses
     RL: NUU (Other use, unclassified); USES (Uses)
        (manufacture of tricarboxy starch by oxidation with hypohalites,
       nitroxy compds., and peroxides)
L8
    ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
AN
     1997:805822 CAPLUS
     128:49880
DN
TI
    Method for cleaning items in particular filters used during foodstuff
IN
    Mol, Martinus Nicolaas Maria; Van Hoof, Stephan Cornelus Johannes Maria
PA
     Heineken Technical Services B.V., Neth.; LHS Micro-Filtrations B.V.; Mol,
    Martinus Nicolaas Maria; Van Hoof, Stephan Cornelus Johannes Maria
SO
     PCT Int. Appl., 11 pp.
     CODEN: PIXXD2
DT
     Patent
ĿA
    English
FAN. CNT 1
                                                                 DATE
     PATENT NO.
                       KIND
                               DATE
                                          APPLICATION NO.
                                           -----
                        ----
                               19971204
                                                                 19970526
PΙ
    WO 9745523
                         A1
                                          WO 1997-NL294
        W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
            DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ,
             VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB,
            GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN.
            ML, MR, NE, SN, TD, TG
    NL 1003225
                         C2
                                19971203
                                           NL 1996-1003225
                                                                   19960529
    CA 2256528
                         AA
                                19971204
                                          CA 1997-2256528
                                                                   19970526
    AU 9729155
                         A1
                               19980105
                                           AU 1997-29155
                                                                   19970526
```

```
AU 717265
                          B2
                                 20000323
     EP 912701
                                 19990506
                                             EP 1997-923333
                          Α1
                                                                     19970526
     EP 912701
                          B1
                                 20021127
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, FI, RO
     CN 1226922
                                 19990825
                                             CN 1997-196870
                                                                     19970526
                          Α
     BR 9709282
                          Α
                                 20000111
                                             BR 1997-9282
                                                                     19970526
     JP 2000511218
                          T2
                                 20000829
                                             JP 1997-542085
                                                                     19970526
     IL 127318
                          A1
                                 20010520
                                             IL 1997-127318
                                                                     19970526
    EP 1260576
                          A2
                                 20021127
                                             EP 2002-77124
                                                                     19970526
     EP 1260576
                          А3
                                 20031015
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, FI, RO, AL
     AT 228560
                          Е
                                 20021215
                                             AT 1997-923333
                                                                     19970526
     RU 2197516
                          C2
                                 20030127
                                             RU 1998-123593
                                                                     19970526
     PT 912701
                          Т
                                 20030228
                                             PT 1997-923333
                                                                     19970526
     ES 2188942
                         Т3
                                 20030701
                                            ES 1997-923333
                                                                    19970526
     CZ 293661
                         В6
                                 20040616
                                             CZ 1998-3922
                                                                    19970526
     NO 9805602
                         Α
                                 19990118
                                            NO 1998-5602
                                                                     19981130
     MX 9810053
                                            MX 1998-10053
                         Α
                                 20000131
                                                                     19981130
                         Α
     KR 2000016193
                                 20000325
                                            KR 1998-709761
                                                                    19981130
     BG 63977
                         B1
                                            BG 1998-102972
                                 20030829
                                                                    19981201
     US 6274186
                         В1
                                            US 1999-194692
                                 20010814
                                                                     19990322
PRAI NL 1996-1003225
                          Α
                                 19960529
     EP 1997-923333
                          Α3
                                 19970526
     WO 1997-NL294
                          W
                                 19970526
     In the title method, a cleaning system based on the combination of a
ΑB
     cyclic nitroxyl compound and a hypohalite is used for
     cleaning apparatus used during the production of foodstuffs, e.g., filters of
     brewing apparatus for improving the removal of contaminants and the recovery of
     flux. A solution containing 4.5 g/L HOCl, 35 mg/L NaBr and 15 mg/L TEMPO
     was used in cleaning of filter for settled beer.
=> d his
     (FILE 'HOME' ENTERED AT 14:08:42 ON 20 APR 2005)
     FILE 'CAPLUS' ENTERED AT 14:09:00 ON 20 APR 2005
L1
              0 S (?PROPYN? OR ?BUTYN?) (L) (HYPOHALI? (L) RADICAL?) (L) OXIDA?
L2
              1 S (?PROPYN? OR ?BUTYN?) (L) (HYPOHALI? (L) RADICAL?)
L3
              4 S OXIDA? (L) (HYPOHALI? (L) RADICAL?) (L) CARBOXYL?
L4
              2 S OXIDA? (L) (HYPOHALI? (L) ?OXIDE) (L) CARBOXYL?
L5
              9 S OXIDA? (L) HYPOHALI? (L) CARBOXYL?
              5 S L5 NOT L3
L6
L7
              9 S OXIDA? (P) HYPOHALI? (P) CARBOXYL?
L8
              3 S HYPOHALI? (L) ?TEMPO (L) NITROX?
=> s hypohali?(1)?tempo(1)carboxy?
           939 HYPOHALI?
          3402 ?TEMPO
        517253 CARBOXY?
L9
             4 HYPOHALI? (L) ?TEMPO (L) CARBOXY?
=> s 19 not 18
1.10
             4 L9 NOT L8
=> d bib hit 1-4
L10 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN
     2004:660459 CAPLUS
TI
     Production of nanoscopic polymer rods from cellulose microcrystal
     templates
```

- Harrisson, Simon; Malmstrom, Eva; Hult, Anders; Hawker, Craig J.; Wooley, ΑU Karen L.
- CS Center for Materials Innovation and Department of Chemistry, Washington University in St Louis, St Louis, MO, 63130-4899, USA
- Abstracts of Papers, 228th ACS National Meeting, Philadelphia, PA, United SO States, August 22-26, 2004 (2004), PMSE-578 Publisher: American Chemical Society, Washington, D. C. CODEN: 69FTZ8
- DTConference; Meeting Abstract
- LΑ English
- AB Nanoscale polymeric rods have been produced by grafting polymers of controlled mol. weight and varying compns. to cellulose microcrystals. The grafting was accomplished via carbodiimide-mediated formation of an amide linkage between polymers carrying a terminal amine functionality, prepared by atom transfer radical polymerization, and carboxylic acid groups on the surface of the cellulose microcrystals which were formed by TEMPO-mediated hypohalite oxidation The resulting rods formed stable suspensions in organic solvents and have been characterized by atomic force microscopy and transmission electron microscopy, as well as spectroscopic techniques. The approach lends itself to the production of a variety of nanoscopic rods of controlled size and functionality.
- ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 2002:327792 CAPLUS
- DN 136:342435
- Method of making carboxylated cellulose fibers and products of the method TI
- Jewell, Richard A.; Komen, Joseph Lincoln; Li, Yong; Su, Bing IN
- PΑ Weyerhaeuser Company, USA
- U.S., 18 pp., Cont.-in-part of U.S. Ser. No. 272,137. SO CODEN: USXXAM
- DT Patent
- LΑ English

FAN.	CNT	3																
	PAT	TENT						DATE			APPL	ICAT	ION	NO.		D	ATE	
																-		
ΡI	US	6379	494			В1		2002	0430		US 1	999-	4189	09		1:	9991	015
	US	6524	348			B1		2003	0225		US 2	000-	6412	76		2	0000	B17
	CA	2384	701			AA		2001	0426		CA 2	000-	2384	701		2	0001	006
	WO	2001	0293	09		A1		2001	0426		WO 2	000-1	US27	837		2	0001	006
		W:	ΑE,	AG,	AL,	AM,	AT,	ΑU,	AZ,	BA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,	CN,
								DM,										
			HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LC,	LK,	LR,	LS,	LT,
			LU,	LV,	MA.	MD,	MG.	MK,	MN,	MW.	MX,	MZ,	NO.	NZ,	PL.	PT.	RO.	RU.
								SL,										
								KG,				-		,	,	,	,	,
		RW:	•					MZ,	•	•	•	•		ZW,	AT,	BE,	CH,	CY,
			-	-	-	-		GB,				•		-	•	•	•	•
								GN,									•	•
	EP	1238	•	•	•	•	•	•	•	•	•	•	•	•		2	0001	006
		R:																
								RO,		•	•	,	,	,	,	,	,	,
	ιΤΡ	2003	-		•	•			•	•		001-	5322	83		2	0001	006
PRAT		1999									0. 0		3322				3001	
- 1411		1999																
		2000																
	WO	2000	-032	1031		YY		2000	T000		•							

- RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- The invention is directed to a method of making carboxylated cellulose fibers whose fiber strength and d.p. is not significantly sacrificed. The method involves the use of TEMPO (2,2,6,6-tetramethylpiperidinyloxy free radical) as a primary oxidant and a hypohalite salt as a secondary oxidant in an aqueous environment.

Preferably the oxidized cellulose is then stabilized against D.P. loss in

alkaline environments and color reversion with a reducing agent such as sodium borohydride. Alternatively it may be treated with an oxidant such as sodium chlorite. The method results in a high percentage of carboxyl groups located at the fiber surface. The product is especially useful as a papermaking fiber where it contributes strength and has a higher attraction for cationic additives. The product is also useful as an additive to recycled fiber to increase strength. The method can be used to improve properties of either virgin or recycled fiber. It does not require high  $\alpha$ -cellulose fiber but is suitable for regular market pulps.

```
ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
T<sub>1</sub>1.0
AN
     2001:868457 CAPLUS
DN
     136:5852
TI
     New process for the preparation of vinyl-pyrrolidinone cephalosporin
     derivatives
ΙN
     Hebeisen, Paul; Hilpert, Hans; Humm, Roland
PA
     Basilea Pharmaceutica A.-G., Switz.
SO
     PCT Int. Appl., 33 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     English
FAN.CNT 1
     PATENT NO.
                         KIND
                                DATE
                                           APPLICATION NO.
                                            ______
     -----
                         ----
                                -----
                                         WO 2001-EP5721 . 20010518
ΡI
     WO 2001090111
                         A1
                                20011129
         W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CO, CU,
             CZ, DE, DK, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     US 2002019381
                         A1
                                20020214
                                           US 2001-860157
                                                                   20010517
     US 6504025
                          В2
                                20030107
     CA 2408941
                          AA
                                20011129
                                            CA 2001-2408941
                                                                   20010518
     EP 1289998
                         Α1
                                20030312
                                            EP 2001-936374
                                                                   20010518
     EP 1289998
                         B1
                                20050330
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     JP 2003535059
                         T2
                               20031125
                                          JP 2001-586298
     EP 1435357
                                20040707
                                          EP 2004-2120
                         A2
                                                                   20010518
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI, CY, TR
PRAI EP 2000-111164
                         Α
                                20000524
     EP 2001-936374
                         А3
                                20010518
     WO 2001-EP5721
                         W
                                20010518
     CASREACT 136:5852; MARPAT 136:5852
RE.CNT 3
              THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
     A process for preparing pharmaceutic compns., a vinyl-pyrrolidinone
AΒ
     cephalosporin derivative of I via the acylation of deacetyl-7-
     aminocephalosporanic acid with II (R1 = a hydroxy protecting group; Y1-Y3
     = an activating group) in base followed by the protection of the
     carboxylic acid group, formation of an aldehyde at C3 using an
     inorg. hypohalite in TEMPO or with MnO2, and reacting
     the aldehyde with III (R = an amino protecting group or group A), was
     accomplished. I can be used for the treatment and prophylaxis of
     infectious diseases, especially infectious diseases caused by bacterial
     pathogens in particular methicillin resistant Staphylococcus aureus (MRSA)
     and Pseudomonas aeruginosa (no data).
```

```
L10 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
```

AN 1997:697180 CAPLUS

DN 127:307619

TI Oxidation of sugars with hypohalides in preparation of carboxylates used in detergents formulation

IN Fleche, Guy

PA Fleche, Guy, Fr.

SO Can. Pat. Appl., 27 pp.

CODEN: CPXXEB

DT Patent

LA French

FAN.CNT 1

I. WIA .	CIVI I						
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
ΡI	CA 2193034	AA	19970622	CA 1996-2193034	19961216		
	FR 2742755	Al	19970627	FR 1995-15269	19951221		
	FR 2742755	B1	19980220				
	NO 9605268	Α	19970623	NO 1996-5268	19961210		
	NO 307886	B1	20000613				
	US 5831043	Α	19981103	US 1996-769050	19961218		
	EP .798310	A1	19971001	EP 1996-402823	19961219		
	EP 798310	B1	20020424	•			
	R: AT, BE, CH,	DE, DK	, ES, FR, GE	B, GR, IT, LI, NL, SE,	PT, IE, FI		
	AT 216703	E	20020515	AT 1996-402823	19961219		
	ES 2176420	<b>T</b> 3	20021201	ES 1996-402823	19961219		
	JP 09235291	A2	19970909	JP 1996-341791	19961220		
PRAI	FR 1995-15269	Α	19951221				

AB Alkaline oxidation of sugars with hypohalides in presence of TEMPO gave the corresponding carboxylates as detergents.

Thus, oxidation of sorbitol in water with hydrochloric acid in presence of TEMPO gave the corresponding glucaric acid in 33% yield. These carboxylates were used in detergents formulation with a whiteness higher than polyacrylates.

IT 2564-83-2, TEMPO

RL: CAT (Catalyst use); USES (Uses)

(oxidation of sugars with hypohalides in preparation of carboxylates as detergents)

```
(FILE 'HOME' ENTERED AT 14:08:42 ON 20 APR 2005)
```

```
FILE 'CAPLUS' ENTERED AT 14:09:00 ON 20 APR 2005
L1
               0 S (?PROPYN? OR ?BUTYN?) (L) (HYPOHALI? (L) RADICAL?) (L) OXIDA?
               1 S (?PROPYN? OR ?BUTYN?) (L) (HYPOHALI?(L) RADICAL?)
L2
               4 S OXIDA? (L) (HYPOHALI? (L) RADICAL?) (L) CARBOXYL?
L3
               2 S OXIDA? (L) (HYPOHALI? (L) ?OXIDE) (L) CARBOXYL?
L4
               9 S OXIDA? (L) HYPOHALI? (L) CARBOXYL?
L5
               5 S L5 NOT L3
L6
              9 S OXIDA? (P) HYPOHALI? (P) CARBOXYL?
L7
              3 S HYPOHALI? (L)?TEMPO(L)NITROX?
L8
L9
               4 S HYPOHALI? (L) ?TEMPO (L) CARBOXY?
L10
               4 S L9 NOT L8
=> s (hypohali?(l)nitrox?(l)carboxy?) and alcohol?
           939 HYPOHALI?
         13208 NITROX?
        517253 CARBOXY?
             5 HYPOHALI? (L) NITROX? (L) CARBOXY?
        380300 ALCOHOL?
L11
             1 (HYPOHALI? (L) NITROX? (L) CARBOXY?) AND ALCOHOL?
=> d bib abs hit
     ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN
L11
     2004:159015 CAPLUS
AN
DN
     140:199022
ΤI
     Procedure for the production of alkynecarboxylic acids by the oxidation of
     alkynyl alcohols with hypohalites in the presence of a nitroxyl
     compound
IN
     Stohrer, Juergen; Fritz-Langhals, Elke; Bruenninghaus, Christian
PA
     Consortium fuer Elektrochemische Industrie G.m.b.H., Germany
SO
     Ger., 11 pp.
     CODEN: GWXXAW
DT
     Patent
LΑ
     German
FAN.CNT 1
     PATENT NO.
                         KIND
                                              APPLICATION NO.
                                 DATE
                                                                      DATE
     -----
                          - - - <del>-</del>
                                              ------
                                 _____
                                                                       -----
PΙ
     DE 10244633
                           B3
                                 20040226
                                              DE 2002-10244633
                                                                      20020925
     EP 1403240
                                              EP 2003-20442
                           A1
                                 20040331
                                                                      20030911
     EP 1403240
                           B1
                                 20040721
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     AT 271533
                           Ε
                                 20040815
                                           AT 2003-20442
                                                                      20030911
     US 2004059154
                           A1
                                 20040325
                                              US 2003-667810
                                                                      20030922
     JP 2004115519
                           A2
                                 20040415
                                              JP 2003-331417
                                                                      20030924
PRAI DE 2002-10244633
                           Α
                                 20020925
OS
     CASREACT 140:199022
     Alkynecarboxylic acids (e.g., propargylic acid) are prepared in high yield
AB
     and selectivity by the oxidation of an alkynyl alc. (e.g., propargylic alc.)
     with a hypohalite (e.g., sodium hypochlorite) in the presence of a
     nitroxyl compound (e.g., 4-hydroxy-TEMPO) at a pH value >7 by continuous
     addition of the alkynyl alc. and the hypohalogenite to the reaction mixture
RE.CNT 2
              THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
     Procedure for the production of alkynecarboxylic acids by the oxidation of
ΤI
     alkynyl alcohols with hypohalites in the presence of a nitroxyl
```

IT Alcohols, reactions

compound

RL: RCT (Reactant); RACT (Reactant or reagent)
(propargyl; procedure for the production of alkynecarboxylic acids by the oxidation of alkynyl alcs. with hypohalites in the presence of a nitroxyl compound)

IT Carboxylic acids, preparation

RL: SPN (Synthetic preparation); PREP (Preparation) (unsatd., alkynecarboxylic acids; procedure for the production of alkynecarboxylic acids by the oxidation of alkynyl alcs. with hypohalites in the presence of a nitroxyl compound)

IT 107-19-7, Propargyl alcohol 110-65-6, 2-Butyne-1,4-diol 764-01-2, 2-Butyn-1-ol

RL: RCT (Reactant); RACT (Reactant or reagent)
(procedure for the production of alkynecarboxylic acids by the oxidation of alkynyl alcs. with hypohalites in the presence of a nitroxyl compound)

#### (FILE 'HOME' ENTERED AT 14:08:42 ON 20 APR 2005)

```
FILE 'CAPLUS' ENTERED AT 14:09:00 ON 20 APR 2005
              0 S (?PROPYN? OR ?BUTYN?) (L) (HYPOHALI?(L) RADICAL?) (L) OXIDA?
L1
L2
              1 S (?PROPYN? OR ?BUTYN?) (L) (HYPOHALI? (L) RADICAL?)
L3
              4 S OXIDA? (L) (HYPOHALI? (L) RADICAL?) (L) CARBOXYL?
              2 S OXIDA? (L) (HYPOHALI? (L) ?OXIDE) (L) CARBOXYL?
L4
              9 S OXIDA? (L) HYPOHALI? (L) CARBOXYL?
L5
              5 S L5 NOT L3
L6
              9 S OXIDA? (P) HYPOHALI? (P) CARBOXYL?
L7
              3 S HYPOHALI? (L) ?TEMPO (L) NITROX?
L9
              4 S HYPOHALI? (L) ?TEMPO (L) CARBOXY?
L10
              4 S L9 NOT L8
L11
              1 S (HYPOHALI? (L) NITROX? (L) CARBOXY?) AND ALCOHOL?
=> s (hypohali?(l)nitrox?) and alcohol?
           939 HYPOHALI?
         13208 NITROX?
            11 HYPOHALI? (L) NITROX?
        380300 ALCOHOL?
L12
             2 (HYPOHALI?(L)NITROX?) AND ALCOHOL?
=> s 111 not 112
L13
             0 L11 NOT L12
=> s 112 not 111
L14
             1 L12 NOT L11
=> d bib abs hit
     ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN
     2002:574994 CAPLUS
DN
     137:126809
     Stable free nitroxyl radicals as oxidation catalysts and process for
ΤI
     oxidation
IN
     Zedda, Alessandro; Sala, Massimiliano; Schneider, Armin
     Ciba Specialty Chemicals Holding Inc., Switz.; Ciba Specialty Chemicals
PΑ
     S.P.A.
SO
     PCT Int. Appl., 16 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     English
FAN.CNT 1
     PATENT NO.
                         KIND
                                 DATE
                                             APPLICATION NO.
                                                                     DATE
                          ----
                                 -----
                                             ______
PΙ
     WO 2002058844
                          A1
                                 20020801
                                            WO 2002-EP340
                                                                     20020115
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
             CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     CA 2429490
                          AA
                                 20020801
                                            CA 2002-2429490
                                                                     20020115
     EP 1353750
                          A1
                                 20031022
                                             EP 2002-715433
                                                                     20020115
     EP 1353750
                                 20040825
                          В1
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
```

	JP 2004524296	T2	20040812	JP 2002-559170	20020115
	AT 274374	E	20040915	AT 2002-715433	20020115
	US 2004063932	A1	20040401	US 2003-466726	20030718
PR	AI EP 2001-810059	A	20010123		
	WO 2002-EP340	W	20020115		
os	MARPAT 137:126809			•	
GI					

AB Invention relates to stable free nitroxyl radicals of formula (I) at least one of the substituents R = 0 and the others are H or OH; X = NR1R2, wherein R1 and R2 = H, C1-18alkyl or together with the N atom to which they are bound from a 5 or 6 membered ring which may be further interrupted by an O atom, HY = an organic or inorg. acid, and n = 0 or 1-4. Further subjects of the invention are an oxidation process for alcs. to aldehydes or ketones or to carboxylic acids in the presence of a compds. I which are used as oxidation catalysts. Thus, 50 g Chimassorb 966, 250 mL toluene, 42 g potassium carbonate, and 72.5 g peracetic acid in acetic acid were allowed to stand for 2 h at 5-10°, 10 g potassium carbonate was added, the mixture was agitated at 25-30° for 2 h, and it was agitated at 50° for 1 h to give a rose-colored product showing m.p. 267-270° and nirtoxy yield by ESR 95%, 0.072 g of which was mixed with 2.5 g 2-octanol, 2.8 g KHCO2, and 10 mL dichloromethane at 10-15°, and 13.8 g 10.5% NaOCl aqueous solution was added to give 2-octanone.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

### IT Hypohalites

RL: RCT (Reactant); RACT (Reactant or reagent)
(alkali salts, oxidizing agents; stable free nitroxyl
radicals as oxidation catalysts and process for oxidation)

IT Alcohols, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
 (stable free nitroxyl radicals as oxidation catalysts and process for oxidation)